as a function of the voltage drop across this simple wire segment. Nonetheless the measurement may vary as a function of temperature and that is compensated for as claim 17 makes clear.

Claims 13 and 18 have been amended to emphasize that the measurement of the voltage drop is taken across a wire segment and therefore not across a separate resistance element.

That wire segment is, for example, the wires for conductors shown at 13, 17 and 17a and these conductors are connected to the power line which supplies the motor winding and also connects the power line with the control circuit. See for example the segment 38 as well. The specification points out that the voltage drop is taken across such a wire segment and not across a separate resistance.

The Examiner should understand that the power lien supplies the motor and the control circuit and that the segment in question can be anywhere as long as it is a wire segment supplied by the power lien and traversed by a current which represents the motor current so that the voltage drop across this wire segment is a measure of that current.

There is enclosed a print of a sketch which makes this clear. The upper Figure shows devices of the WHIPPLE type in which the current measurement is taken with the aid of a resistance element and the invention where the resistance element as a separate element is avoided. Current measurements, as the Examiner will appreciate, normally utilize a galvanometer or other volt

meter connected across a standard shunt which is the resistance element shown in the upper sketch.

WHIPPLE, which has been applied by the Examiner under 35 USC 103 does not show a current sensor which measures the voltage drop along a simple wire segment. It therefore does not teach or suggest the invention as defined in claims 13-23 and claims 13 and 23 must be considered to be allowable over WHIPPLE.

Claim 14 specifically says that the wire segment is a piece of the current supply line connecting the power line with the motor control circuit (see that piece 37 of FIG. 4) and in WHIPPLE the current sensor is provided in series with the load 100 and not across a piece of current supply line connecting the power line with the motor control circuit as defined in claim 14.

Claims 15-17 are directed to the computing unit which is responsive to the measurement of the voltage drop across a piece of wire and that is not suggested in WHIPPLE.

Claims 19-23 correspond to claims 14-17 in apparatus form and thus it cannot be said that any of these claims are suggested by WHIPPLE either.

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Claim 14 specifically says that the wire segment is a piece of the current supply line connecting the power line with the motor control circuit (see that piece 37 of FIG. 4) and in WHIPPLE the current sensor is provided in series with the load 100 and not across a piece of current supply line connecting the power line with the motor control circuit as defined in claim 14.

Claims 15-17 are directed to the computing unit which is responsive to the measurement of the voltage drop across a piece of wire and that is not suggested in WHIPPLE.

Claims 19-23 correspond to claims 14-17 in apparatus form and thus it cannot be said that any of these claims are suggested by WHIPPLE either.

AMENDED CLAIMS

13. A method of determining a current draw of a pump driven by an electric motor having a power line and a motor-control circuit connected to said power line, said method comprising the steps of:

(a) measuring a voltage drop across at least a portion of a conductor in the form of a wire segment having a definite resistance and connecting said power line with said motor-control circuit; and

(b) calculating said current draw from said voltage drop.

17. The method defined in claim 13 wherein in calculating said current draw from said voltage drop, a computer unit forming part of said motor control circuit compensates for a temperature of said portion of said conductor.

18. An electronically controlled pump assembly comprising:

an electric motor having a power line connected thereto for energizing said electric motor;

a motor control circuit connected to said motor and said power line for electronically controlling said pump assembly;

a pump driven by said motor; and

means for measuring a voltage drop across at least a portion of a conductor in the form of a wire segment having a definite resistance and connecting said power line with said motor control circuit and calculating said current draw from said voltage drop.